Facility-Wide Communication System

ABSTRACT OF THE INVENTION

A method and system for communication within an energy-transmission-limited environment. RF transceivers throughout the site are located site-wide such that areas within the site in which communications are desired are within range of at least one of the RF transceivers. At each location RF transceivers are connected to a control unit. The control unit provides power to the transceivers and allows bi-directional communication of audio/voice and/or digital information. The control units may be networked to each other using standard network type category-5 or equivalent cables and may communicate to one another via the network connection. The control units may also be networked via an alternating current powerline by using an alternating current modem. The transceiver of the present invention utilizes single sideband modulators to modulate voice and/or digital signals. The signals are demodulated and filtered at a receiving end of the transceiver. A comb filter attenuates noisy signals with drifting harmonics.